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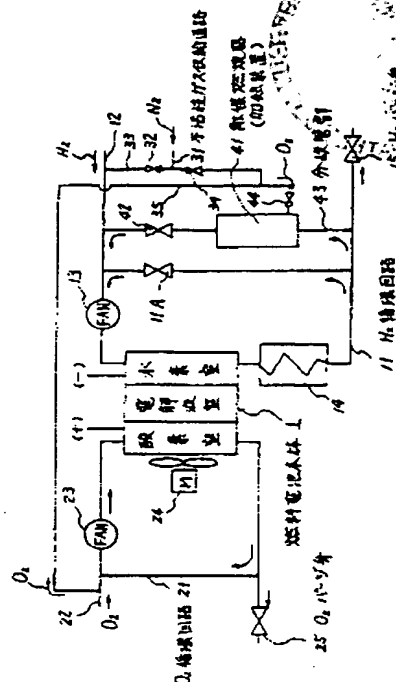
APPLICATION DATE : 10-11-87
APPLICATION NUMBER : 62283835

APPLICANT : FUJI ELECTRIC CO LTD;

INVENTOR : WATANABE SHUNJI;

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TITLE : ALKALINE ELECTROLYTE FUEL CELL SYSTEM



ABSTRACT : PURPOSE: To quickly preheat a fuel cell main body by burning purge H_2 and purge O_2 produced when N_2 is replaced by reaction gas in a catalyst combustor, and by circulating the reaction gas containing heated N_2 to each unit cell.

CONSTITUTION: H_2 or purge H_2 supplied to a H_2 circulation circuit 11 is used as a fuel gas, and O_2 or purge O_2 supplied to an O_2 circulation circuit 21 is used as an oxidizing agent gas. A heating device including a catalyst combustor 44 is connected to the H_2 circulation circuit 11 or the O_2 circulation circuit 21 and an inert gas supply passage 31 through a valve. A fuel cell main body 1 is preheated to a specified temperature necessary for power generation. By utilizing the time required to replace N_2 with reaction gas and reaction gas which is usually exhausted because of containing N_2 , the fuel cell main body whose temperature is $15^\circ C$ or lower is preheated to a temperature of several tens degrees centigrade necessary for power generation without specific preheating time and a specific energy source.

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